REMARKS

Applicant respectfully request entry of this response, as well as reconsideration and allowance of the subject application. Claims 1-26 were pending at the time the Office Action was issued. No claims have been amended. Claims 1-26 remain pending.

In the current Action, the Office objects to drawing figures 3 and 4 as lacking a required box or line around these figures. The Office objects to claims 14 and 21, stating that "[t]he preamble should be more descriptive". Claims 1, 16, and 14 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 14 and 21 stand rejected under 35 U.S.C. §112 as being indefinite for failing to point out and distinctly claim the subject matter. Claims 14-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,561,795 to Sarkar (hereinafter, "Sarkar"). Finally, claims 1-13 and 21-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Pub. No. 2003/0009477 to Wilding et al. (hereinafter, "Wilding") and Sarkar.

CLAIM OBJECTIONS

As noted above, the Office objects to claims 14 and 21, stating that "[t]he preamble should be more descriptive". (*Office Action of 8/22/06*, p. 3). More specifically, the Office states that these claims only recite the preamble of "a method comprising", and that these preambles should include language similar to that of claims 1 and 6. Applicant respectfully traverses the rejection.

Applicant respectfully submits that the Office fails to explain what in the law requires a "more descriptive" preamble. In fact, the Office's objection lacks citation to any statute, regulation, or even to the MPEP. Furthermore,

Applicant respectfully submits that the pertinent portion of the MPEP—§608.01(m) entitled "Form of Claims"—does not discuss any such requirement. If the Office disagrees, Applicant respectfully requests that the Office set forth its basis in the law for its objection.

As such, Applicant respectfully requests that the objection be withdrawn and thanks the Office in advance for its reconsideration.

REJECTIONS UNDER 35 U.S.C. §101

Claims 1, 6, and 14 stand rejected under 35 U.S.C. § 101. The Office states that these claims are directed to non-statutory subject matter.

First, the Office cites to MPEP §2106 IV.B.2(b), a section entitled "Statutory *Process* Claims". (emphasis added). The Office also offers the following analysis: "Claims 1, 6, and 14 are not statutory because the claims do not produce a tangible result.... Independent claims 1, 6, and 14 merely describe the structural components of the claimed elements and how these structural components are linked to one another in processing environment." (*Office Action of 8/22/06*, p. 4). Thus, while the Office appears to view claims 1, 6, and 14 as *apparatus* claims, the Office cites to a portion of the MPEP that involves computer-related *process* claims

Applicant submits, however, that claims 1 and 6 define statutory apparatus or machine claims, while claim 14 defines a statutory process. As discussed in detail below, Applicant specifically submits that: (1) claims 1 and 6 recite <u>machines</u>—not processes—and, as such, recite explicit statutory subject matter, and (2) a portion of method claim 14 recites "writing...data", and as such produces tangible results, similar to the suggestion of the Office

quoted below. Applicant therefore respectfully requests reconsideration and withdrawal of the outstanding rejections.

Independent Claims 1 and 6 Recite "Machines"

Applicant respectfully submits that Claims 1 and 6 recite machines constituting statutory subject matter under 35 U.S.C. §101. In fact, Applicant submits that the Office appears to characterize these claims as machines (e.g. by describing the elements as "structural components") as well as processes (e.g. by citing to a portion of the MPEP detailing statutory process claims). In any event, Applicant sets forth the legal standard for a rejection under §101, including a case addressing a similar rejection under §101 as that of the instant rejection of Claims 1 and 6. Through analysis of this case, Applicant will show that the Office's rejection of the instant claims stands in disagreement with prevailing law.

The Federal Circuit in *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994) held that the following computer-related apparatus claim constituted statutory subject matter under 35 U.S.C. §101:

> A rasterizer for converting vector list data representing sample magnitudes of an input waveform into anti-aliased pixel illumination intensity data to be displayed on a display means comprising:
> (a) means for determining the vertical distance between the endpoints of each of the vectors in the data list;
> (b) means for determining the elevation of a row of pixels that is spanned by the vector;
> (c) means for normalizing the vertical distance and elevation; and
> (d) means for outputting illumination intensity data as a predetermined function of the normalized vertical distance and elevation.

In *Alappat*, the Office and a Board addressing the issue on appeal stated that this claim is not statutory subject matter under §101. The reasons given by the Board are similar to those given in the instant rejection by the Office of Claims 1 and 6. The majority decision of the Board stated that it is proper to treat the above-cited rasterizer claim as if drawn to a method, which appears to be similar to the Office's current citation to MPEP §2106 IV.B.2(b). *See Ex Parte Alappat*, 23 USPQ2d 1340, 1345 (BPAI, 1992). Specifically, the Board held that this claim amounts to nothing more than a process claim where each of the steps combine to form a "mathematical algorithm for computing pixel information." *Alappat* at 1539, quoting *Ex Parte Alappat* at 1345. Further, that "when the claim is viewed without the steps of this mathematical algorithm, no other elements or steps are found." *Ex Parte Alappat* at 1346. The Board's reasoning is similar to that of the rejection of instant claims 1 and 6, where the Office argues that "[t]he claim limitations only monitor, maintain, and receive transactions in a transaction processing system." (*Office Action of 8/22/06*, p. 4).

The Federal Circuit overturned the Board. The Circuit stated that the Board erred in concluding that this rasterizer claim is nothing more than a process claim. *Alappat* at 1540. In deciding that the Board erred, the Circuit relied on the language of the claim on its face as well as the claim when read in light of the disclosure of the specification. *Id.* The Circuit also analyzed whether the claimed subject matter as a whole is a disembodied mathematical concept, which in essence represents nothing more than a "law of nature," "natural phenomenon," or "abstract idea." *Id* at 1544.

Applicant sets forth the analysis performed by the Circuit and then applies this analysis to the instant rejection of Claims 1 and 6.

The Circuit relied on 35 U.S.C. §101, entitled "Inventions patentable," which states that: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title". (emphasis added). Such statute explicitly provides, in unequivocal language, for machines as a statutory category of subject matter for which Applicant is entitled to apply for a patent.

Following this standard, the Circuit's analysis focused on the claim reciting "a rasterizer" and other elements. The Circuit analyzed the language of the claim, concluding that the rasterizer claim recites a machine on its face.

Applicant establishes below that the subject matter recited in independent Claims 1 and 6 *recites a machine on its face*. Applicant provides independent Claims 1 and 6 below for the convenience of the Office.

Claim 1 recites a transaction processing system comprising:

- a database writer configured to process data in accordance with one or more transactions within the transaction processing system;

- a transaction monitor for monitoring transactions within the transaction processing system;

- a log writer for maintaining audit trail data associated with transactions within the transaction processing system; and

- one or more non-disk persistent memory units associated with the log writer and configured to receive, from the log writer, audit trail data.

Claim 6 recites a transaction processing system comprising:

- a database writer configured to process data in accordance with one or more transactions within the transaction processing system;

- a transaction monitor for monitoring transactions within the transaction processing system;

- a log writer for maintaining audit trail data associated with transactions within the transaction processing system;

- one or more non-disk persistent memory units associated with the log writer and configured to receive, from the log writer, audit trail data; and

- one or more audit log disks configured to receive audit trail data that is first received by the one or more non-disk persistent memory units.

Claims 1 and 6 both recite a "transaction processing system", including such elements as a "database writer", a "transaction monitor", and a "log writer". These terms on their face recite a machine—not a process or a series of steps performed on a computer as the Office appears to interpret them as.

The Circuit also studied the disclosure of the specification in deciding whether or not the rasterizer claim constitutes a statutory class of subject matter. The Circuit determined that the rasterizer claim recites a machine based on the fact that the disclosure describes computer elements that are recited in the claim. The claim recites means-plus-function elements, though this was not dispositive in the Circuit's analysis. Rather, the Circuit relied on the disclosure to show computer elements that may be within the scope of the rasterizer claim. Similarly, exemplary elements are described in the instant specification that, when analyzed as examples of elements recited in the instant claims, show that the instant claims recite a machine and not a process.

Independent Claims 1 and 6 when read in light of the specification, clearly and unequivocally recite machines. It is black letter law that

Applicant's claims are to be interpreted in light of the disclosure of the specification. *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1579, 28 USPQ2d 1333, 1339 (Fed. Cir. 1993); *and see Miles Lab., Inc. v. Shandon, Inc.*, 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993).

The specification describes examples of subject matter recited in the claims that are not solely or necessarily a "process" and as such are not governed by the portion of the MPEP cited by the Office. Instead, this subject matter recites one or more machines, which are explicitly statutory.

Claim 1 recites "a transaction processing system" comprising a "database writer", a "transaction monitor", a "log writer", and "one or more non-disk persistent memory units", each of which are described and diagrammed as a machine—not as a process or a series of steps performed on a computer. Applicant refers the Office to examples of these elements in the specification and figures: transaction processing systems 100 (Fig. 1), 200 (Fig. 2), and 600 (Fig. 6); database writers 102 (Fig. 1), 202 (Fig. 2), and 602 (Fig. 6); transaction monitors 104 (Fig. 1), 204 (Fig. 2), and 604 (Fig. 6); log writers 106 (Fig. 1), 206 (Fig. 2), and 606 (Fig. 6); and one or more non-disk persistent memory units 310 (Fig. 3), 400 (Fig. 4), 500 (Fig. 5), 612, and 614 (Fig. 6).

Claim 6 recites "a transaction processing system" comprising a "database writer", a "transaction monitor", a "log writer", "one or more non-disk persistent memory units", as well as "one or more audit log disks". Applicant refers the Office to the above-cited examples of some of these elements discussed immediately above. Furthermore, examples of one or more audit log disks can be found as elements 616 and 618 (Fig. 6) in Applicant's specification and accompanying figures. These exemplary elements are shown

and described as machines—not as steps in a process as it appears the Office believes.

In addition to the above-cited Federal Circuit law, Applicant submits that MPEP also dictates that claims 1 and 6 define statutory subject matter. As stated in the MPEP, "*[i]f a claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product.*" MPEP §2106 IV.B.2(a) (emphasis added).

In sum, Applicant respectfully submits that independent claim 1 and 6 recite machines—and not processes. Thus, these claims recite statutory subject matter, as discussed above. Applicant thus respectfully requests the Office to withdraw its rejections, and Applicant thanks the Office in advance for its reconsideration.

Independent Claim 14 Recites a Statutory "Process" Claim

In making out a rejection of this claim under §101, the Office again cites to §2106 IV.B.2(b) of the MPEP entitled "Statutory Process Claims" and states that "claims 1, 6, and 14 are not statutory because the claims do not produce a tangible result." (*Office Action of 8/22/06*, p. 4). The Office also states that "[i]ndependent claims 1, 6, and 14 merely describe the structural components of the claimed elements and how these structural components are linked to one another in a processing environment." Again, Applicant notes that the Office appears to characterize claim 14 as an apparatus, yet cite to a portion of the MPEP involving process claims.

In any event, the Office goes on in the Action to state that "[r]egarding the tangible results with the above mentioned system components, the *log*

writer should perform a particular <u>write operation</u> in an effort [] for the claim to comprise tangible results and/or show a manipulation of data". (emphasis added).

Applicant thanks the Office for its suggestion. Applicant also notes that the claim 14 does indeed already perform a write operation—precisely as suggested by the Office. In fact, claim 14 recites a method comprising (emphasis added):

- receiving data associated with transaction-induced state changes; and

- ***writing the received data*** to non-disk persistent memory sufficient to commit an associated transaction.

Therefore, Applicant respectfully submits that because this claim recites "writing…data", it does indeed comprise "tangible results and/or…a manipulation of data" as stated by the Office. Applicant again greatly thanks the Office for its suggestion regarding the achievement of statutory subject matter. Because Applicant's original claim 14 complies with the Office's suggestion, and because this claim does indeed recite tangible results, Applicant respectfully submits that this claim recites statutory subject matter.

Applicant thus respectfully requests the Office to withdraw its rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claims 14 and 21 stand rejected under 35 U.S.C. §112 as being indefinite for failing to point out and distinctly claim the subject matter. More specifically, the Office states: "Claim 14 recites 'transaction-induced state'. What does an 'induced-state' and/or a[n] 'induced-transaction' mean? Claim 21 recites 'predetermined condition'. What is this 'predetermined condition'

and who or what determines if this condition has been met?" (*Office Action of 8/22/06*, p. 5). Applicant respectfully disagrees with the rejections, and instead intends to help the Office better understand the meaning of these terms.

In regards to claim 14, Applicant initially suggests that the Office should read the pertinent element as "transaction-induced state *changes*", rather than as a "transaction-induced state" as the Office does in the current Action. Furthermore, Applicant queries why the Office wishes to interpret the terms "induced-state" and "induced-transaction"—when Applicant's claim recites "transaction-induced state changes". As such, the claim does not recite "state" inducement or "transaction" inducement, but instead recites "state changes" that are "transaction-induced".

With this in mind, Applicant specifically refers the Office to paragraphs [0017] through [0021] of Applicant's specification for <u>examples</u> of "state changes". This section, entitled "Committing Transactions", uses the phrase "state changes" eight times. Applicant notes that while these uses merely comprise examples of state changes and should not be read into the claim, these examples should serve to help the Office better understand the claim element at issue. Furthermore, Applicant refers the Office to paragraph [0001] for a discussion of <u>examples</u> of the meaning of the term "transaction".

Applicant respectfully submits that the combination of these sections of the specification should help the Office to define—but certainly not limit—the meaning of the claim term "transaction-induced state changes". Applicant notes that that the meaning of the term "induce" is of course well-known (e.g. to bring about). In sum, Applicant submits that the specification discusses both "state changes" and "transactions"—and that the specification as originally

filed thus renders the claim element "transaction-induced state changes" understandable to the skilled artisan.

Applicant thus respectfully requests that the rejection of this claim be withdrawn.

In regards to claim 21, Applicant also traverses the Office's rejection, although for different reasons. Here, the Office notes that this claim recites a "predetermined condition", but seems to object to the claim's *exclusion* of what the condition comprises and/or who or what determines whether the condition has been fulfilled.

Applicant respectfully submits that the claim does not need to recite any specific embodiment of the "predetermined condition", nor must the claim recite who or what determines whether the condition has been met. Instead, Applicant respectfully submits that this *claim element is capable of standing alone*. That is, Applicant submits that conditioning an act of a method claim upon the fulfillment of a "predetermined condition" is perfectly acceptable. Of course, if the Office wishes to inspect different embodiments of a "predetermined condition", Applicant directs the Office's attention to paragraph [0050] Applicant's specification. In sum, however, Applicant respectfully submits that the term "predetermined condition" is proper as written.

Applicant thus respectfully requests that the rejection be withdrawn and thanks the Office in advance for its reconsideration of the issue.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 14-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Sarkar. Applicant respectfully traverses the rejections.

Claim 14 recites a method comprising (emphasis added):

- receiving data associated with transaction-induced state changes; and

- *writing the received data to <u>non-disk</u> persistent memory* sufficient to commit an associated transaction.

In making out a rejection of this claim, the Office states that Sarkar discloses both elements of the recited method. For the first element, the Office cites to Col. 8, lines 5-31 of Sarkar. For the second element, the Office cites to Sarkar's abstract as well as col. 6, lines 8-21 and 48-62. Applicant respectfully traverses the rejections for the reasons set forth below.

Applicant respectfully submits that the Office fails to state a *prima faice* case of anticipation, as the Office fails to show how the cited reference discloses all elements of Applicant's claim. Specifically, Applicant submits that the cited portions of Sarkar fail to disclose "writing the received data to *non-disk* persistent memory", as recited in Applicant's claim. (emphasis added).

First, Applicant attempts to identify what the Office views as the "receiv[ed] data" of Applicant's claim. In stating that Sarkar discloses the "receiving" element of Applicant's claim, the Office cites to the following portion of the reference:

FIGS. 5, 6, and 7 show the information contained in the different types of audit records. *There are four types of audit records* related to the present invention, *a Begin-of-Transaction (BOT) Audit Record 52, a Commit Audit Record 54, a Physical Audit Record 56, and a*

Functional Audit Record, also designated by reference numeral 56.
FIG. 5 is a diagram that shows the information contained in a Begin-Of-Transaction (BOT) Audit Record. A BOT Audit Record is stored when processing of a transaction first begins. For all types of Audit Records, the Length of the Audit Record is stored at the beginning and at the end of the record so that Audit Records may be read both forwards and backwards. The BOT Audit Record includes a BOT Identifier to indicate the type of Audit Record. The Transaction number in the BOT Audit Record is the unique identifier assigned to a transaction by the Transaction Processing Control 16.

FIG. 6 is a diagram that shows the information contained in a Commit Audit Record 54. ***A Commit Audit Record is written to the Audit File 28*** when processing of all tasks associated with a transaction is complete. Prior to writing a Commit Audit Record for a transaction, the transaction is said to be "uncommitted" and once the Commit Audit Record is written the transaction has "committed." If a system failure occurs before a transaction has committed, all changes to the database caused by the uncommitted transaction must be undone at recovery time to ensure database consistency. Database changes caused by transactions that have committed are allowed to remain.

(*Sarkar*, Col. 8, lines 5-31) (emphasis added).

Applicant thus submits that the Office appears to cite to the four types of audit records, all emphasized above, as Applicant's "receiv[ed] data". <u>Without conceding nor commenting on this contention</u>, Applicant now turns its attention to the passages cited by the Office as disclosing "writing *the* received data to *non-disk* persistent memory sufficient to commit an associated transaction." (emphasis added). Here, the Office cites three passages, of which only the pertinent portions are reproduced and discussed in order below:

The disclosure relates to a transaction processing system where ***audit information*** for database updates and the status of transactions in process ***is sequentially <u>written in audit records in an audit file</u>***, where the audit file may be used to restore the database to a consistent state following a system failure.

(*Sarkar*, abstract) (emphasis added).

As emphasized above, this passage of Sarkar discusses writing audit information in audit records in an <u>audit file</u>. With remembrance of this, attention now turns to the pertinent portion of the second cited Sarkar passage:

> ***Audit Processing 32 handles <u>writing records to the Audit File 28</u>*** and is interlaced, via software, with the Data Manager 20. The Data Manager invokes Audit Processing when the Data Manager begins processing a transaction to ***write a Begin-Of-Transaction (BOT) type record <u>to the Audit File</u>***...

(*Sarkar*, col. 6, lines 8-13) (emphasis added).

Again emphasized above, this second passage of Sarkar once more discusses writing records to an <u>audit file</u>, namely audit file 28. With remembrance of this, attention now turns to the third and final cited Sarkar passage, reproduced in its entirety:

> The "soft checkpointing" of the prior art occurs at time t6. At periodic intervals, this soft checkpoint operation is performed. The soft checkpoint operation entails determining and saving LOWTRANSLSN and MINBUFLSN values. According to Myre, LOWTRANSLSN "is the LSN of the first log record written by the oldest in-flight transaction[,]" and MINBUFLSN is the LSN corresponding to the cache or "buffer" page "that was updated prior to any other dirty page." These two values are saved to the Log File Header 42 for use in recovering the database in the event of a system failure. When the time comes to recover the database, the minimum of these two values is used to determine how far back from the point in the Log File at which the system failure occurred that log records must be processed to recover the database.

(*Sarkar*, col. 6, lines 48-62).

With regards to this third and final passage, Applicant first submits that it is unclear as to which portion of the passage the Office believes relates to "writing the received data to non-disk persistent memory sufficient to commit an associated transaction." If the Office disagrees, Applicant respectfully requests that the Office point out with a little more specificity which portion of

this passage discloses the pertinent element of Applicant's claim. Secondly, Applicant submits that even if the Office contends that this passage relates to Applicant's claim, Applicant respectfully submits that it cannot be shown to disclose "writing <u>the</u> received data to non-disk persistent memory sufficient to commit an associated transaction", as recited in Applicant's claim. (emphasis added). This is so, Applicant submits, because this passage *nowhere* discusses one or more of the four "audit records" that the Office believes discloses Applicant's "receiv[ed] data". Instead, this passage solely relates to "LOWTRANSLSN and MINBUFLSN values". As such, continuation of the Office's own logic precludes this passage from disclosing "writing <u>the</u> received data". (emphasis added).

Having analyzed and thrust aside the third passage cited by the Office, close attention may now be paid to the first two passages and their recitation of <u>writing records to an **audit file**</u>. As the reader may verify below, Sarkar's Audit File 28—the only audit file depicted by Sarkar—is shown to be *located within element 30.*
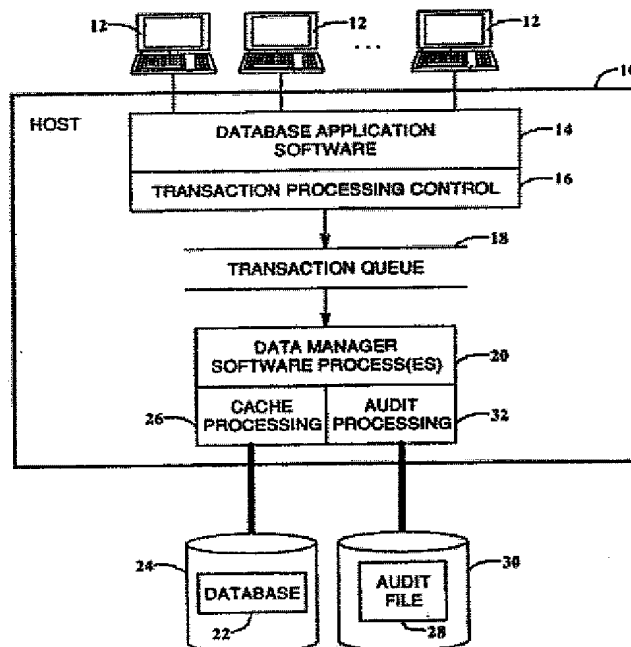

FIG. 1

Applicant thus ventures to determine what exactly element 30 of Fig. 1 comprises. As stated no less than seven times in the text, Sarkar *identifies this element to be "disk 30"*. The two passages discussed above therefore discuss writing audit records to an audit file, *which itself is stored on disk 30*. In essence, these passages of Sarkar thus describe writing audit records to a disk. Applicant submits that a "disk" fails to disclose a *"non*-disk", as recited in Applicant's claim. (emphasis added).

Applicant thus submits that the Office fails to show how Sarkar discloses "*writing the received data to __non-disk__ persistent memory* sufficient to commit an associated transaction."

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 15-20 depend from claim 14 and, as such, the remarks made above in regards to claim 14 apply equally to these claims. The rejections of these claims are also improper as failing to disclose these claims' own recited features which, in combination with those recited in claim 14, are not shown to be disclosed in the reference of record.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1-13 and 21-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wilding and Sarkar. Applicant respectfully traverses the rejections.

Claim 1 recites a transaction processing system comprising (emphasis added):

- a database writer configured to process data in accordance with one or more transactions within the transaction processing system;

- a transaction monitor for monitoring transactions within the transaction processing system;

- a log writer for maintaining audit trail data associated with transactions within the transaction processing system; and

- one or more ***non-disk persistent memory units*** associated with the log writer and configured to receive, from the log writer, audit trail data.

In making out a rejection of this claim, the Office states that Wilding teaches all of the elements of the claim, but "does not expressly teach audit trail data." (*Office Action of 8/22/06*, p. 8). The Office, however, then cites Sarkar as teaching this final element and states that it would have been obvious for the skilled artisan to combine these teachings.

Applicant respectfully traverses the rejection and submits that the Office fails to state a *prima facie* case of obviousness. More specifically, Applicant submits that the Office fails to show how the references teach all of the elements of Applicant's claim, as Wilding fails to teach "one or more *non-disk persistent memory units*", as recited in Applicant's claim. (emphasis added).

In stating the Wilding does indeed teach an element, the Office cites paragraphs [0068] and [0084] of the reference. These paragraphs discuss a

"transaction log buffer", which Wilding states is used "to store data for []
database applications *before transferring said data to said permanent storage*".
(*Wilding*, abstract) (emphasis added). Wilding states that permanent storage
may comprise a disk, which is also illustrated by "disk storage 2" of Wilding's
Fig. 1. Applicant further notes that Wilding describes that data or log records
"*must eventually be placed on permanent storage in order to ensure
consistency and to provide a history of changes to the database.*" *Id.* at [0002]
(emphasis added).

With this in mind, Applicant contrasts this "transaction log buffer" with
Applicant's claimed "one or more *non-disk persistent memory units*". In
particular, Applicant refers the Office to the following portion of the instant
specification:

> Non-disk persistent memory, as defined in this document, should exhibit
> the following properties: *durability*, connectivity, and access.
>
> Durability refers to non-disk persistent memory that is durable, without
> refresh, and which *can survive the loss of system power*. It should
> additionally provide durable, self-consistent metadata in order to *ensure
> continued access to the data stored on the non-disk persistent memory
> after power loss or soft failures*.

('*258 Specification*, paragraphs [0025]-[0026]) (emphasis added).

This passage states that in order for a memory to be "persistent", it must
be "durable", and in order for a memory to be "durable", it must "ensure
continued access to the data stored [on the memory] after power loss or soft
failures." *Id.* at [0026]. Applicant respectfully submits that the "transaction
log buffer" has not been shown to contain these durable qualities. In fact,
Applicant further submits that such a "buffer" does not indeed contain such
qualities—as buffers traditionally do not allow for continued access to data

stored on the buffer after a power failure. Instead, buffers such as Wilding's merely comprise temporary storage facilities which must be flushed in order to maintain the data. Wilding supports such a claim, as it notes that log records "must eventually be placed on permanent storage in order to ensure consistency and to *provide a history of changes to the database.*" (*Wilding*, [0002]) (emphasis added). Furthermore, Applicant submits that the Office has not made a showing to the contrary.

As such, Applicant respectfully submits that Wilding's cited "transaction log buffer" is not a "non-disk ***persistent*** memory unit" as recited in Applicant's claim. (emphasis added).

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 2-5 depend from claim 1 and, as such, the remarks made above in regards to claim 1 apply equally to these claims. The rejections of these claims are also improper as failing to disclose these claims' own recited features which, in combination with those recited in claim 1, are not shown to be taught or suggested in the references of record, either singly or in combination.

Claim 6 recites a transaction processing system comprising (emphasis added):

- a database writer configured to process data in accordance with one or more transactions within the transaction processing system;

- a transaction monitor for monitoring transactions within the transaction processing system;

- a log writer for maintaining audit trail data associated with transactions within the transaction processing system;

- one or more ***non-disk persistent memory units*** associated with the log writer and configured to receive, from the log writer, audit trail data; and

- one or more audit log disks configured to receive audit trail data that is first received by the one or more non-disk persistent memory units.

In making out a rejection of this claim, the Office uses reasoning similar to that addressed above in regards to claim 1. Thus, Applicant traverses the rejections for at least the reasons discussed above in regards to claim 1. Specifically, Applicant submits that the Office fails to show how either of the cited references teach or suggest "non-disk *persistent* memory", as recited in Applicant's claim. (emphasis added).

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 7-13 depend from claim 6 and, as such, the remarks made above in regards to claim 6 apply equally to these claims. The rejections of these claims are also improper as failing to disclose these claims' own recited features which, in combination with those recited in claim 6, are not shown to be taught or suggested in the references of record, either singly or in combination.

Claim 21 recites a method comprising (emphasis added):

- maintaining at least two write aside buffers in ***non-disk persistent memory***, a first of the buffers comprising a primary buffer, a second of the buffers comprising a mirror buffer;

- synchronously flushing audit data associated with one or more transactions to said at least two write aside buffers; and

- when a predetermined condition is met, writing the audit data in the write aside buffers to one or more audit log disks.

In making out a rejection of this claim, the Office states that "the limitations of this claim [have] been noted in the rejections of claims 1, 4, 5, and 8 presented above. It is therefore rejected as set forth above." (*Office Action of 8/22/06*, p. 9). Applicant thus respectfully traverses the rejections for at least the reasons discussed above in regards to claim 1. Specifically, Applicant submits that the Office fails to show how either of the cited references teach or suggest "non-disk *persistent* memory", as recited in Applicant's claim. (emphasis added).

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Claims 22-25 depend from claim 21 and, as such, the remarks made above in regards to claim 21 apply equally to these claims. The rejections of these claims are also improper as failing to disclose these claims' own recited features which, in combination with those recited in claim 21, are not shown to be taught or suggested in the references of record, either singly or in combination.

Claim 26 recites a method comprising using ***non-disk persistent memory*** to commit transactions. (emphasis added).

In making out a rejection of this claim, the Office uses reasoning similar to that addressed above in regards to claim 1. Thus, Applicant traverses the rejections for at least the reasons discussed above in regards to claim 1. Specifically, Applicant submits that the Office fails to show how either of the cited references teach or suggest "non-disk *persistent* memory", as recited in Applicant's claim. (emphasis added).
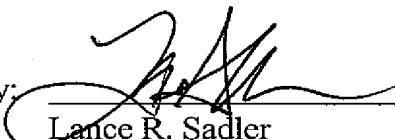
For at least this reason, Applicant respectfully submits that this claim stands allowable.

CONCLUSION

Applicant respectfully submits that all of the claims are in condition for allowance. Accordingly, Applicant requests a Notice of Allowability be issued forthwith. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully submitted,

Dated: 11/15/06

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